



C200  
Catalyst Bicester  
Wendlebury Road

# Environmental Risk Assessment

## Environmental Risk Assessment -

Project:	<b>Catalyst, Wendlebury Farm, Wendlebury Road, Chesterton, Bicester. OX25 2PA</b>
For:	<b>Albion Land (Three) Ltd</b>
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## 1.0 INTRODUCTION

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### 1.1. Scope of Assessment

1.1.1. This Environmental Risk Assessment (ERA) has been completed to support the ECMP & CMP in relation to Planning Permission **19/01740/HYBRID** at Catalyst, Wendlebury Farm, Wendlebury Road, Chesterton, Bicester. Oxon. OX25 2PA

1.1.2. A number of assessments have been considered to determine the environmental risks posed by the proposed new development and to identify whether the level of risk is considered acceptable.

1.1.3. The proposed development consists of six distinct processes:

- Cut and Fill to Plateau the David Lloyd Plot along with other areas to enable the following works:
- Installation of foul drainage to serve the David Lloyd Plot
- Installation of foul pump station and pumping main
- Installation of Storm Drainage to serve the David Lloyd Plot
- S278 works
- Installation of all services to serve the David Lloyd plot.

1.1.4. The objectives of the assessment process are as follows:

- Identify potential risks that the activity may present to the environment;
- Screen out those that are insignificant and don't require detailed assessment;
- Where appropriate identify potentially significant risks and undertake detailed assessment;
- Where appropriate choose the right control measures; and
- Report the findings of the assessment.

1.1.5. This report contains justification for all risk assessments completed or screened out from requiring further consideration and provides an overall assessment of the impact of the new development

### 1.2. Site Location and Environmental Setting

1.2.1 The proposed plant will be located at:

Catalyst  
Wendlebury Farm  
Wendlebury Road  
Chesterton  
Bicester  
Oxon  
OX25 2PA

The National Grid Reference for the site is: **SP575210 (easting 457535, northing 221019)**. The site covers an area of approximately 25 acres and is located within existing farmland

- 1.2.2. The site currently comprises of grass pastureland.
- 1.2.3. The proposed working hours will be as set out in the CEMP and the CMP
- 1.2.4. The nearest surface water feature is the Langford Brook, approximately 250m away, which runs along the eastern perimeter boundary of the development site.
- 1.2.5. A review of the Environment Agency's flood maps indicate that the application site is not within a designated flood zone, but the drainage works to facilitate this plot are.
- 1.2.6. There are no Sites of Special Scientific Interest (SSSI) or SACs within the site.
- 1.2.7. The nearest human sensitive receptors to the proposed development is the adjacent Garden Centre which is 50m away
- 1.2.8. The nearest residential properties are a Static Home Park and the Promised Land Farm, both are some 400m away from the site.

### **1.3. Associated Hazards**

- 1.3.1. Potential risks to the environment from construction activities which must be considered and included in the assessment, if they are likely to be present:
  - Emissions releases to Air;
  - Discharges to Surface Waters;
  - Discharges to ground or groundwater;
  - Odour Impacts;
  - Noise and Vibration Impacts;
  - Impacts from Accidents;
  - Disposal or Recovery of Wastes produced on Site.

### **1.4. Nearby Sensitive Receptors**

- 1.4.1. Nearby receptors within 400m of the application site have been identified. Key receptors that have the potential to be impacted by the site are summarised in Table 1.4.6 below.
- 1.4.2. The Langford Brook runs along the eastern boundary of the overall development site, this is a small clear flowing watercourse with several cattle drinks along its banks. The Langford Brook separates the development from the Bicester Wetlands Reserve
- 1.4.3. There is a Local Nature Reserve within close proximity to the site, accessed off of the Thames Water access road, which is known as the Bicester Wetlands Reserve. It comprises predominantly of a wetland bird sanctuary with small areas of varied habitat around the perimeter.

- 1.4.4. In consideration of the close proximity to the site, and the designations for both wildlife and grasslands, this site has also been included as a sensitive receptor.
- 1.4.5. There is an established hedgerow running north to south through the overall development site which turns east towards Langford Brook, at the base of this hedge is a ditch carrying field water to the brook
- 1.4.6. This drainage ditch has been included as sensitive receptors due to the proximity to the site and potential to be impacted by any surface water discharges from the site.
- 1.4.7. There is a new hotel under construction to the west of the site on the other side of Wendlebury Road
- 1.4.8. The Thames Water sewage treatment works sits at the end of the access road adjacent the site, beyond Langford Brook,

**Table 1.4.10: Sensitive Receptors**

Receptor	Type	Distance (m)	Direction
Bicester Garden Centre	Commercial	50	N
Static Hames Park	Residential	400	SW
Hotel	Commercial	70	W
Promised Land Farm	Commercial	400	S
Thames Water Treatment Works	Industrial	400	NE
Bicester Wetlands Reserve	Ecological	400	E
Drainage Ditch and Hedge	Ecological	150	E
Langford Brook	Ecological	250	E

## 2.0 ENVIRONMENTAL RISK ASSESSMENTS

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### 2.1. Scope of Assessments Completed

- 2.1.1. A number of assessments have been considered to determine the environmental risks posed by the development and to identify whether the level of risk is considered acceptable.
- 2.1.2. There will be no emissions to atmosphere other than exhaust fumes from plant and machinery.
- 2.1.3. There will be no emissions to surface water or groundwater other than clean rain-water run off.
- 2.1.4. Following completion of all risk assessments, the potential impact of risks identified to nearby sensitive receptors have been determined to be either insignificant, or insignificant following the application of any appropriate mitigation and / or control measures listed.
- 2.1.5. Each assessment completed is summarised below with a qualitative assessment of the risks from the proposed development

### 2.2. Fume Emissions

- 2.2.1. Emissions to atmosphere will be from machinery and vehicle exhaust fumes, e.g :-
- 2.2.2. Site Plant, dumpers, dozers, excavators, forklifts, cranes, MEWP's etc
- 2.2.3. On site generator
- 2.2.4. Exhaust emissions released from plant and machinery is well within regulations as they are standard equipment used on all construction sites, and thus no further assessment has been carried out
- 2.2.5. Exhaust emissions released from the small 70kVA diesel generator used to run the site welfare facilities is well within regulations as it is a standard generator used on all industrial estates, and thus no further assessment has been carried out.
- 2.2.6. In summary, it is concluded that the proposed development will have no likely significant effects in relation to air quality.

### 2.3. Odours

- 2.3.1. There will be no odours generated on site
- 2.3.2. In summary, it is concluded that the proposed development will have no likely significant effects in relation to odours.

## **2.4. Noise and Vibration**

- 2.4.1. The key sensitive receptors at risk of exposure to noise are residential properties, the Garden Centre, the Promised Land Farm and the Hotel (under construction) as referred to in table 1.4.6
- 2.4.2. The main sources of noise will be lorry movements on site associated with the delivery and removal of soils, aggregates and materials along with the plant and machinery used to excavate and load the same.
- 2.4.3. The assessment concludes that the potential impact of noise and vibration from the proposed Development would not adversely affect nearby sensitive receptors, and that there would be no need for additional mitigation measures beyond the "Guidance Notes for Site – Dust and Noise" document submitted with the CMP & CEMP.

## **2.5. Dust Emissions**

- 2.5.1. Dust can be generated through normal construction activities and these are controlled through specific RAMS and Guidance Procedures.
- 2.5.2. Environmental Sensitive receptors considered, include the Garden Centre, Bicester Wetlands Reserve and the adjacent properties.
- 2.5.3. The assessment concludes that the potential impact of dust from the proposed Development would not adversely affect nearby sensitive receptors, and that there would be no need for additional mitigation measures beyond the "Guidance Notes for Site – Dust and Noise" document submitted with the CMP & CEMP.
- 2.5.4. The assessment concludes that the potential hazard from dust is considered to be low, based on the control measures to be put in place.



## **2.6. Contamination to Water and Land**

- 2.6.1. Receptors identified are the ground and groundwater beneath the site, the field surface water drainage ditch which runs north through the site and returns to Langford Brook and to Langford Brook itself, which runs to the east of the site.
- 2.6.2. The potential risk to the environment from spillage to water and land is considered to be low.
- 2.6.3. The potential pollutants will be silt from rainwater run-off or conditions such as spillages/leaks from on-site bunded fuel tanks or spillages of fuel or oil associated with plant and machinery.
- 2.6.4. Materials generated from construction activities will be suitably stored on site in order to prevent contamination of the soils, water course or land.
- 2.6.5. Fuels will be stored in bunded bowsers with suitable spill kits to prevent contamination of the soils, water course or land.
- 2.6.6. The site will be carefully managed including good housekeeping procedures and regular checks will be made within and around the site for litter and spillages.
- 2.6.7. The site access and adjacent public highway will be regularly inspected to ensure the access routes in and out of the site are kept clean.
- 2.6.8. The assessment concludes that the potential hazard to water and land from operations on the site is considered to be low, based on the control measures in place.

## 3.0 Conclusions

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### 3.1. Conclusions

3.1.1 A number of environmental risk assessments have been carried out to determine whether the proposed development can be undertaken without causing pollution to the environment. All risk assessments have been undertaken in accordance with relevant Guidance and best practice.

3.1.2 The assessments undertaken consider the possible impacts on sensitive receptors from a range of potential emissions that could be produced from the proposed development. The risk assessments have considered both the intended design and operational practices at the site and conclude that:

- Fume emissions will have no likely significant effects in relation to air quality and no further assessment is required.
- Odour generation from the site operations is not anticipated, therefore the potential risk from odour can be considered not significant or likely to adversely impact on local receptors.
- Noise levels from construction activities are not likely to adversely affect or impact local receptors when controlled by the details set out in the "Guidance Notes for Site – Dust and Noise" document submitted with the CMP & CEMP.
- Dust levels from construction activities are not likely to adversely affect or impact local receptors when controlled by the details set out in the "Guidance Notes for Site – Dust and Noise" document submitted with the CMP & CEMP.
- The overall risk to receptors from accidental spills is considered low due to the low-risk nature of activities on the site and the prevention measures detailed in the CMP & CEMP.

3.1.3 As presented in this report, the site will have appropriate control measures and management systems in place to ensure that the operations do not have any significant impacts or represent an unacceptable risk to the local environment.



## Appendix A – Risk Assessments

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**Table 1: Odour**

Hazard	Source	Pathway	Receptor	Probability of Exposure	Consequence	Magnitude of risk	Risk Management	Residual risk
Odour from deliveries to site	Delivery Vehicles	Air Prevailing Wind	Local residents, workforce, visitors to local Garden Centre and Wetlands Reserve	Low	Low	Low	Use the most modern machinery available and maintain deliveries in the zones allocated on the Site Setup Plan in the CEMP	Low
Odour from site welfare facilities	Accommodation, bins, skips	Air Prevailing Wind	Local residents, workforce, visitors to local Garden Centre and Wetlands Reserve	Low	Low	Low	Maintain good hygiene conditions, empty bins and skips regularly and ensure welfare is only taken in the Site Compound zone indicated on the Site Setup Plan in the CEMP	Low

**Table 2: Noise and Vibration**

Hazard	Source	Pathway	Receptor	Probability of Exposure	Consequence	Magnitude of risk	Risk Management	Residual risk
Noise from vehicle movements	On site operations	Noise through the air and vibration through the ground	Local residents, workforce, visitors to local Garden Centre	Low	Medium	Low	<p>Use the most modern machinery available</p> <p>Ensure vehicle movements into and out of the site only take place during the working hours set out in the CMP &amp; the CEMP</p> <p>All plant and vehicles used on site (such as the dumpers, dozers, excavators etc) will only be used within the site confines and will be subject to regular maintenance and service schedules.</p> <p>All plant on site will be subject to speed limits to ensure noise levels remain low</p> <p>All plant and equipment will be fitted with appropriate sound attenuation and acoustic isolation, and will be subject to regular inspection and maintenance schedules to maintain operational performance</p> <p>Strictly adhere to the guidance details set out in the "Guidance Notes for Site – Dust and Noise" document submitted with the CMP &amp; CEMP.</p>	Low

**Table 3: Dust Emissions**

Hazard	Source	Pathway	Receptor	Probability of Exposure	Consequence	Magnitude of risk	Risk Management	Residual risk
Releases of dust from incoming /outgoing vehicles	Vehicle movements	Air transport and inhalation	Local residents, workforce, visitors to local Garden Centre	Low	Medium	Low	<p>All vehicles delivering materials or removing waste residues from the site will be covered.</p> <p>In the unlikely event of dust generation caused by vehicle movements, roadways will be swept and/or dampened down as appropriate to prevent the mobilisation of dust during dry and windy weather.</p> <p>Also refer to "Guidance Notes for Site – Dust and Noise" document submitted with the CMP &amp; CEMP.</p>	Low

**Table 4: Contamination to Water & Land**

Hazard	Source	Pathway	Receptor	Probability of Exposure	Consequence	Magnitude of risk	Risk Management	Residual risk
Contaminated run-off/rainwater from site surfaces	Site	Percolation through soils, direct run-off from site across the ground and entering surface water drains or natural ditches e.g. Langford Brook	Nearby natural habitats. Pollution of nearby surface water	Low	Medium	Medium	<p>The site is located off Wendlebury Road and is pastureland, existing drainage is through open field ditches.</p> <p>Due to the site operations it is not expected construction material will have any leaching potential.</p> <p>Cut off ditches are to be dug and maintained between the site and Langford Brook. A suitably sized (temporary) settlement pond shall be formed to capture any sediments from rainwater run off to prevent it reaching Langford Brook</p> <p>Settlement tanks shall be utilised for any pumping operation between the pond and Langford Brook</p> <p>All wastes produced from the process will be stored in suitably secured and sealed containers located inside the building.</p> <p>All ditches will be inspected regularly for signs of deterioration or run-off.</p> <p>All staff will be trained in the procedures and correct use of equipment and sufficient spill kits will be maintained on site.</p> <p>Staff trained appropriately to minimise emissions to water and records maintained.</p>	Low



Hazard	Source	Pathway	Receptor	Probability of Exposure	Consequence	Magnitude of risk	Risk Management	Residual risk
Fuel oils stored on site	Loss of containment on site	Percolation through soils, direct run-off from site across the ground and entering surface water or groundwater	Nearby natural habitats	Low	Medium	Medium	<p>Fuel oils will be stored within secure bunded bowzers, which will be provided with secondary containment with a capacity of 110% of the volume of the tank.</p> <p>All potentially polluting substances will be contained in bunded tanks provided with dedicated secondary containment with a capacity of 110% of the volume of the tank. Regular inspections of containment will identify leaks.</p> <p>A spill clean-up procedure is in place to minimise the impact from spills and leaks.</p> <p>All staff will be trained in the procedures and correct use of equipment and sufficient spill kits will be maintained on site.</p> <p>Staff trained appropriately to minimise contamination to water and records maintained.</p>	Low

Table 5: Litter

Hazard	Source	Pathway	Receptor	Probability of Exposure	Consequence	Magnitude of risk	Risk Management	Residual risk
Litter	Litter from site	Transportation through the air and over land	Site employees Local residents, visitors to local Garden Centre and nearby natural habitats.	Low	Low	Low	The site will be fully fenced off with lockable gates, which will be checked regularly to ensure they are in good working order. The site will be carefully managed including good housekeeping procedures and regular checks will be made within and around the site for any litter/debris. In addition, the site access and highway outside will be regularly inspected and any litter/debris found will be picked up by staff. Any issues identified will be recorded, investigated and appropriate remedial action will be taken as soon as practicable.	Low

**Table 6: Trees, Hedges and Nesting Birds**

Hazard	Source	Pathway	Receptor	Probability of Exposure	Consequence	Magnitude of risk	Risk Management	Residual risk
Nesting Birds	Trees, hedges & grassland	Destruction of habitat, accidental Damage to habitat, noise, plant and machinery	Nesting Birds	Low	Low	Low	<p>No tree removal or hedge removal will take place in the bird nesting season.</p> <p>Areas will be routinely checked for wildlife and signed off by the Environmental &amp; Biodiversity Champion (project manager) on site before any removal, felling or excavation works can commence.</p> <p>All works to comply with the Tyler Grange AIA &amp; AMS.</p>	Low
Tree Removal	Trees & Hedges	Risk of removing retained trees	Developments	Low	Low	Low	<p>All retained tree and hedge will be clearly identified prior to work commencing on site</p> <p>All retained trees and hedges will be securely fenced in accordance with BS5837</p> <p>All retained trees and hedges will have signs erected in accordance with BS5837</p> <p>Any works in close proximity to retained trees and hedges will require a permit</p> <p>All works to comply with the Tyler Grange AIA &amp; AMS</p>	Low

**Table 7: Accidents**

Hazard	Source	Pathway	Receptor	Probability of Exposure	Consequence	Magnitude of risk	Risk Management	Residual risk
Impact by Vehicle	All on-site machinery and vehicles	Direct physical contact	Drivers, on-site staff, Clients, professionals and visitors	Low	Medium	Medium	<p>Activities will be managed and operated in accordance with a management system (which will include site security measures to prevent unauthorised access). See CMM &amp; CEMP.</p> <p>A Traffic Management Plan will be developed to manage foreseeable risks from the vehicle movements around site.</p> <p>Site security measures to prevent unauthorised access will include security locks on the main gate and fencing of the site perimeter.</p> <p>A Site Perimeter Inspection procedure will be implemented with written weekly reports</p> <p>General traffic movements on site will be in accordance with Site rules.</p> <p>Appropriate signage for vehicles will be provided.</p> <p>Drivers/visitors to the site will be given health and safety inductions and instructions on safe routing</p>	Low

<p>Overfilling of tanks and spillages of fuel oil</p>	<p>Tanks and containment</p>	<p>Direct contact, surface water runoff</p>	<p>On-site staff, Clients, professionals and visitors. Nearby Natural Habitats</p>	<p>Low</p>	<p>Medium</p>	<p>Medium</p>	<p>All tanks for fuel storage will have suitable secondary containment. Bunds (of which there will be one) will be designed to contain 110% of the volume of the largest tank or 25% of the total volume (whichever is the greatest).</p> <p>Fuel storage zones will be set up to contain the areas exposed to potential spillages. Procedures will be in place for dealing with any spills and clean up procedures and staff training will be provided.</p> <p>Spill kits will be provided, and staff will be trained in their use.</p>	<p>Low</p>
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<p>Arson and / or vandalism and or theft causing the release of polluting materials to air (smoke or fumes), water or land.</p>	<p>Unauthorised access</p>	<p>Transportation through the air of smoke. Spillages by direct run off from site</p>	<p>Site employees, on-site staff, Clients, professionals visitors, members of the public and local residents.</p>	<p>Medium</p>	<p>High</p>	<p>High</p>	<p>Activities shall be managed and operated in accordance with a management system (which shall include fire and spillage procedures).</p> <p>A Fire Plan will be compiled to manage foreseeable risks from the site works. The site shall have a monitored CCTV &amp; fire detection and alarm system.</p> <p>All plant and equipment and electrical installations will be kept maintained and in good working condition and subject to routine inspection and maintenance. Site security measures to prevent unauthorised access includes a perimeter security fence and security gates around the site.</p> <p>Security gates will be kept locked and secured outside normal working hours. Firefighting equipment will be maintained on site in accordance with fire regulations.</p> <p>The site will have a dedicated smoking area situated outside of the building away from any storage areas.</p> <p>Good housekeeping measures will be employed across the site.</p>	<p>Low</p>
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